

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
17 February 2005 (17.02.2005)

PCT

(10) International Publication Number  
**WO 2005/015828 A1**

(51) International Patent Classification<sup>7</sup>: **H04L 12/24**,  
H04Q 3/00

(21) International Application Number:  
PCT/EP2003/008766

(22) International Filing Date: 7 August 2003 (07.08.2003)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): **TELECOM ITALIA S.P.A.** [IT/IT]; Piazza degli Affari, 2, I-20123 Milano (IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **AREDDU, Marco** [IT/IT]; Telecom Italia S.p.A., Via G. Reiss Romoli, 274, I-10148 Torino (IT). **ARIZIO, Riccardo** [IT/IT]; Telecom Italia S.p.A., Via G. Reiss Romoli, 274, I-10248 Torino (IT). **CLARETTO, Claudio** [IT/IT]; Telecom Italia S.p.A., Via G. Reiss Romoli, 274, I-10148 Torino (IT). **DE MARTINO, Luigi** [IT/IT]; Telecom Italia S.p.A., Via G. Reiss Romoli, 274, I-10148 Torino (IT). **GENTILE, Gabriele** [IT/IT]; Telecom Italia S.p.A., Via G. Reiss

Romoli, 274, I-10148 Torino (IT). **RUSSO, Riccardo** [IT/IT]; Telecom Italia S.p.A., Via G. Reiss Romoli, 274, I-10148 Torino (IT).

(74) Agents: **MARKOVINA, Paolo** et al.; Pirelli & C. S.p.A., Viale Sarca, 222, I-20126 Milano (IT).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

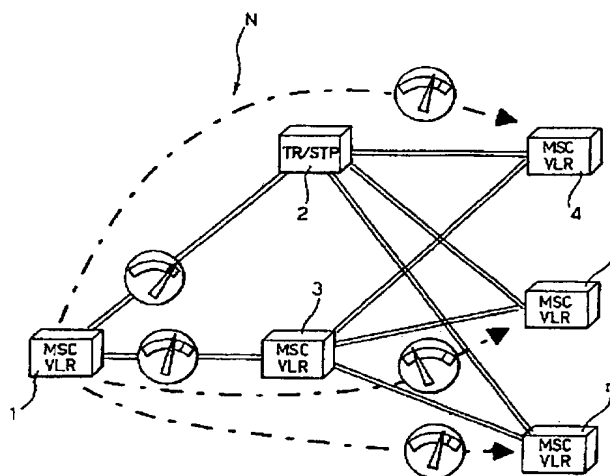
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NH, SN, TD, TG).

Published:

— with international search report

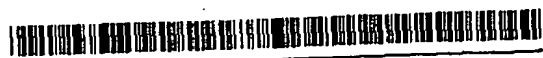
[Continued on next page]

(54) Title: A METHOD FOR THE STATISTICAL ESTIMATION OF THE TRAFFIC DISPERSION IN TELECOMMUNICATION NETWORK



(57) Abstract: A method for evaluating traffic dispersion at an exchange (Exk) in a communications network, the exchange being arranged for applying a set of routing rules (RLk) in allotting to a plurality of links (i.e. circuit groups) incoming traffic directed towards a given destination. The method includes the steps of: - incrementally (202, 214) generating (208) traffic quantum representative of said traffic, - producing a distribution (210) of the traffic quantum over the circuit groups according to the set of routing rules (RLk); the distribution thus obtained being statistically representative of the dispersion of said incoming traffic over said plurality of circuit groups at the exchange (EXk). The steps of incrementally (202, 214) generating (208) traffic quantum representative of the traffic and producing a distribution (210) of said traffic quantum are performed in the absence of interference with operation of the exchanges/nodes in the communications network.

**WO 2005/015828 A1**



*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*